Amendments to the Claims:
This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original)   Spectrometry diagnostic electronic circuit comprising digital data detection means corresponding to detected pulses and amplitude measurement means to associate a measured amplitude with a detected pulse (24), wherein pulse rejection means (25) use detected digital data to reject every pulse with a width that exceeds a pulse width threshold (tc) and any new pulse during a programmed time interval (T3), if a first pulse has been detected during the programmed time interval.

2. (Original)   Spectrometry diagnostic electronic circuit set forth in claim 1, wherein calibration means include a histogram memory (30) to sort digital data corresponding to the detected pulses that were not rejected by the pulse rejection means, by calibration energy range when the detected pulses originate from a standard source.

3. (Currently Amended)   Spectrometry diagnostic electronic circuit set forth in ~~either~~ claim 1 ~~or 2~~, wherein:
   - sort means (28, 26) sort firstly all detected pulses and secondly detected pulses that were not rejected by the pulse rejection means, by detection energy range (25), and
   - count means (29, 27) count firstly all detected pulses and secondly detected pulses that were not rejected by the pulse rejection means, by detection energy range (25).

4. (Original)   Spectrometry diagnostic electronic circuit according to claim 1, wherein at least one circular memory (M1, M2) stores digital data at a configurable rate (K2).

5. (Original)   Spectrometry diagnostic electronic circuit according to claim 1, wherein means for excluding pulses exclude pulses for which the measured amplitude is less than an amplitude threshold value (Es).

6. (Original) Spectrometry diagnostic electronic circuit according to claim 1, wherein at least one input amplifier (A) amplifies detected analogue pulses and at least one analogue/digital converter (A/N) converts the detected analogue pulses into said digital data.

7. (Original) Spectrometry diagnostic electronic circuit set forth in claim 6, wherein the circular memory (M1, M2) memorises the history of data output from the analogue/digital converter (A/N).

8. (Currently Amended) Particle counting system including particle detection means to form detected pulses and means (15) of processing the detected pulses, wherein the processing means (15) include a spectrometry diagnostic electronic circuit <u>comprising digital data detection means corresponding to detected pulses and amplitude measurement means to associate a measured amplitude with a detected pulse (24), wherein pulse rejection means (25) use detected digital data to reject every pulse with a width that exceeds a pulse width threshold (tc) and any new pulse during a programmed time interval (T3), if a first pulse has been detected during the programmed time interval.</u> ~~set forth in any of claims 1 to 7~~.

9. (Original) Particle counting system set forth in claim 8, wherein the processing means (15) include a shared random access memory (19) connected to a communication network (20).

10. (Currently Amended) Particle counting system set forth in ~~either~~ claim 8 ~~or 9~~, wherein the particles are hard X-rays.